

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Appl. No** : **10/799,397**  
**Applicant** : **Roy et al.**  
**Filed** : **March 12, 2004**  
**Title** : **Dry Mix Compositions and Method for Making and  
Utilizing the Same Having an Enhanced Anti-Microbial  
Shelf Life**  
  
**TC/A.U.** : **1794**  
**Examiner** : **Stulii, Vera**  
  
**Docket No.** : **6357US**

**APPLICANT'S APPEAL BRIEF**

**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, VA 22313-1450**

**Dear Sir:**

The Applicant of the above-identified U.S. patent application submits this Appeal Brief in support of an appeal from the November 28, 2008 final rejection of claims 1, 6-19, 23-45 and 57-62 in this application. Please charge the required fee to Deposit Account No. 07-0900. This application has already been subject to a Pre-Appeal Brief Conference where it was determined that there is at least one actual issue for appeal. As the Examiners have foregone the opportunity to issue a new non-final, presumably this application will now either be allowed or permitted to go to the Board of Appeals.

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**I. REAL PARTY IN INTEREST**

The above-identified patent application has been assigned to General Mills, Inc., with the assignment being recorded May 25, 2005 with the U.S. Patent and Trademark Office on Reel No. 16278, Frame No. 0089.

**II. RELATED APPEALS AND INTERFERENCES**

There does not exist any known related appeals or interferences that would directly affect or be directly affected by or have a bearing on the decision in this case.

**III. STATUS OF CLAIMS**

Presently, claims 1, 6-19, 23-45 and 57-62 stand finally rejected. The rejected claims are herewith appealed.

**IV. STATUS OF AMENDMENTS**

No amendments to the claims have been made following the final rejection set forth in the Office Action of November 28, 2008 (hereinafter "the Office Action").

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

Independent claim 1 is directed to a dry mix composition for use in a bakery product comprising about 50-80% flour and a leavening system as described on page 9, lines 4-12. The composition also includes about 0.1% to about 1.0% encapsulated acid as described on page 12, lines 28-29. The encapsulated acid has a mean particle size of about 150 microns to about 840 microns as described on page 13, lines 7-9. The acid is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid,

phosphoric acid, sodium acid phosphate and mixtures thereof as described on page 13, lines 1-2.

Claims 2-5 have been canceled.

Claims 6-17 are not separately argued.

Claim 18 depends from claim 1 and further requires that the encapsulated acid has a minimum melting point of 150°F as described on page 13, lines 12-13.

Claim 19 is an independent claim directed to a batter composition for use in a bakery product that comprises about 10% to about 80% flour and includes a leavening system as described on page 9, lines 10-11 and 24. The batter composition further comprises about 0.01% to about 1.0% encapsulated acid as described on page 9, line 12. The acid has a particle size of about 150 microns to about 840 microns as described on page 13, lines 8-9. The existing moisture is recited as a ratio of about 50:1 to about 1:1 as described on page 9, line 15. The encapsulated acid is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, sodium acid sulfate and mixtures thereof as described on page 13, lines 1-2.

Claims 20-22 have been canceled.

Claim 23 is not separately argued.

Claim 24 depends from claim 19 and further requires that the encapsulated acid has a minimum melting point of 150°F as described on page 13, lines 12-13.

Claims 25-34 are not separately argued.

Claim 35 is an independent claim directed to a method for preparing a bakery product which comprises the steps of providing a dry mix, with the dry mix on a dry weight basis comprising about 50% to about 80% flour, and a leavening system as described on page 9, lines 4-12. The method provides the dry mix with about 0.01% to about 1.0% encapsulated acid as described on page 12, lines 28-29. The method also comprises forming a batter comprising the dry mix and a moisture, in a ratio of dry mix to moisture of about 50:1 to about 1:1 as described on page 9, line 15. The method also comprises allowing the leavening system to react in the batter, depositing individual serving size portions of the batter into heated oil and deep frying the batter in oil having a temperature of about 270°F to about 400°F to produce a fried bakery product as described on page 9, lines 16-20. The fried bakery product achieves an internal cooked temperature of about 170°F to about 230°F as described on page 18, lines 24-29. The fried bakery product has a yeast free and mold free shelf life of at least 21 days as described on page 8, lines 10-16.

Claim 36 is not separately argued.

Claim 37 depends from claim 35 and further requires that the encapsulated acid of the dry mix has a mean particle size from about 150 microns to about 840 microns as described on page 13, lines 7-9.

Claim 38 depends from claim 35 and further requires that the fried bakery products have a yeast free and mold free shelf life of least 30 days as described on page 8, line 15.

Claims 39-45 are not separately argued.

Claims 46-56 have been canceled.

Claim 57 depends from claim 35 and further requires that the encapsulated acid has a minimum melting point of 150°F as described on page 13, lines 12-13.

Claim 58 is an independent claim directed to a fried bakery product which comprises a dry mix composition including about 50% to about 80% flour, a leavening system as described on page 9, lines 4-12 and about 0.01% to about 1.0% encapsulated acid as described on page 12, lines 28-29. In addition, the encapsulated acid must have a mean particle size of about 150 microns to about 840 microns as described on page 13, lines 7-9. The product also comprises moisture in a ratio of about 50:1 to about 1:1 as described on page 9, line 15. The product has an extended yeast-free and mold-free shelf life of at least 21 days as describe on page 8, lines 1-2.

Claim 59 depends from claim 35 and further requires that the fried bakery products has an extended yeast free and mold free shelf life of least 30 days as described on page 8, line 15.

Claim 60 is not separately argued.

Claim 61 depends from claim 58 and further requires that the bakery product is a cake donut as described on page 8, line 10.

Claim 62 depends from claim 58 and further requires that the encapsulated acid has a minimum melting point of 150°F as described on page 13, lines 12-13.

## **VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

A. Whether claims 1, 6-19 and 23-34 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,165,524 to Narayanaswamy et al. in view of U.S. Patent No. 6,312,741 to Navarro.

B. Whether claims 35-45 and 57-62 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,165,524 to Narayanaswamy et al. in view of U.S. Patent No. 6,312,741 to Navarro and U.S. Patent No. 4,929,464 to Willyard et al.

## VII. ARGUMENTS

A. Whether claims 1, 6-19 and 23-34 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,165,524 to Narayanaswamy et al. in view of U.S. Patent No. 6,312,741 to Navarro.

In order to establish a prima facie case of obviousness, each and every limitation of the claims must be met. See M.P.E.P. § 2143 (*citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127 U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). As stated by the Court of Appeals for the Federal Circuit, "[i]t is necessary to consider 'the reality of the circumstances, in other words, common sense--in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.'" *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992), (quoting *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979)). Further, if a reference disclosure has a different purpose from the claimed invention, the inventor would accordingly have had less motivation or occasion to consider it then they would if the reference relates to the same problem. *Id. citing In re Clay*, 966 F.2d 656, 659-60 (Fed. Cir. 1992). A proper rejection under 35 U.S.C. § 103 cannot be based on hindsight knowledge of the invention under consideration for the sole basis of attempting to meet the recitation of the claims. *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 218 USPQ 865, 870 (1983).



1) Claims 1 and 6-17

Initially, it should be noted that claim 1 of the present application is directed to a dry mix composition having about 50 to about 80% flour and about 0.1% to about 1.0% encapsulated acid having a mean particle size of about 150-840 microns, wherein the acid is citric, fumaric, lactic, malic, phosphoric, sodium acid sulfate or mixtures thereof. The Examiner relies on Narayanaswamy et al., which teaches a batter composition, not a shelf stable dry mix composition as taught by claim 1. The Examiner then attempts to modify the batter of Narayanaswamy et al. with the teachings of Navarro which is directed to a baked product. Therefore, it must be initially realized that Narayanaswamy is concerned with a shelf stable batter, Navarro is concerned with prolonging the shelf life of an already baked product, and claim 1 is directed to a dry mix. To this end, the Applicant would submit that one of ordinary skill in the art would not even look to an invention concerned with preserving an already baked product (Navarro) to modify a batter intended to be placed on a store shelf and used to make a baked product which would be presumably, immediately consumed by a consumer (Narayanaswamy). In addition, it cannot be overlooked that **neither of these prior art patents is directed to a dry mix composition as claimed. Furthermore, neither Narayanaswamy et al. nor Navarro teach 50-80% flour as claimed, the amount of acid claimed, or a mean particle size of the acid of about 150-840 microns as claimed.**

With respect to the percentage flour and percentage encapsulated acid, the Examiner admits that Narayanaswamy et al does not teach 50% to 80% flour or the 0.1% to about 1.0% encapsulated acid and the Examiner does not allege that Navarro addresses this deficiency. Therefore these features should be clearly distinguishing.

With respect to the size limitation, the Examiner admits that Narayanaswamy et al. does not teach a mean particle size of about 150-840 microns as claimed. The Examiner then turns to Navarro which teaches coated fumaric acid having a particle size from about 70 to 140 microns. **Clearly, this particle size is outside of the claimed**

range. Apparently, the Examiner is of the opinion that, since independent claim 1 of the present application recites a range of “about 150 microns to about 840 microns” and Navarro discloses a particle size from about 70 microns to about 140 microns, the word “about” allows for a size slightly above 140 microns and slightly below 150 microns such that the ranges overlap. While the Applicant does agree that the word “about” is not claiming an exact number but rather some type of variation from the end points of the range, Applicant respectfully submits that the Examiner is expanding the word “about” from its intended meaning. The courts have already ruled that “about” is not an arbitrary term but rather a flexible word with a meaning similar to “approximately” or “nearly.” See *Ex parte Eastwood*, 163 USPQ 316, 317 (Pat. Off. Bd. App. 1968). The courts have held that the term “about” must be determined based on the facts of the case, particularly the prior art verses invention disclosures. Navarro teaches particle size from about 70 to 140 microns, i.e., a 70 micron range. Actually, Navarro specifically discloses a preferred size of 105 microns. It would be unreasonable to assume that either the 70 micron value or the 140 micron value could be expanded an additional 10 or more microns (approximately 15% for the 70 microns and 7% for the 140 microns) based on the word “about.” In fact, the Examiner’s attention is additionally drawn to the Federal Circuit case of *Eiselstein v. Frank*, 52 F.3d 1035, 34 USPQ 2d 1467, 1468, 1471 (Fed. Cir. 1995) wherein claims reciting a nickel based alloy containing “the balance nickel with nickel constituting about 50 to about 60% of the alloy” were held not to include a nickel range of 45-55%. With this in mind, Applicant respectfully submits that the use of the word “about” clearly does not correlate the upper end of 140 microns in Navarro overlapping with the lower end of 150 microns as presently claimed. **In other words, a range of 70-140 microns is not “about” a range of 150-840 microns.**

In regards to the Examiner’s second argument that one of ordinary skill in the art would have been motivated to modify the particle size depending on a desired thickness of the particle coating and the amount of substance contained therein, it would appear that the Examiner has actually provided no support for this type of modification. Indeed, close review of Navarro makes clear that tortilla dough made with a large sized, i.e.,

mean particle size of 300 microns, encapsulated fumaric acid particulates was deemed particularly undesirable. The Examiner's attention is drawn to Figure 1 of the Navarro patent clearly showing that line 8 provides for a much too low pH content. Note that the acid dissolution profile is important because the tortilla is pressed into shape at approximately 30 minutes and it is important for the dough to remain neutral at this time so that the pressed tortilla does not retract into a smaller shape. See the discussion in column 7, line 34 through column 7, line 60. Indeed, the only line that yields a desired dissolution profile is line 2 corresponding with the preferred mean particle size of about 105 microns. See column 5, lines 30-35 and column 7, lines 27-29. In view of the test results set forth in Navarro explicitly stating that adding larger sized encapsulated fumaric acid particles is considered highly undesirable, it is unclear why the Examiner would consider it obvious to increase the particle sizes of Navarro significantly beyond the high end of 140 microns. Indeed, in view of Navarro's explicit statement that the mean particle size coated dispersed fumaric acid particulate should be set at about 70-140 microns, preferably about 80-130 microns, more preferably about 90-120 microns, and most preferably 105 microns (see column 3, lines 50-56), presumably it would be obvious to one of ordinary skill in the art to use a fumaric acid particulate size no greater than 140 microns and actually closer to 105 microns as that is the explicit teaching in column 3, lines 50-60. Any other size would be quite contrary to the teaching of the Navarro reference. Given that: 1) Navarro teaches that it is most preferable to use a mean particulate size of 105 microns; 2) Navarro specifically discloses that using large sized particulates is particularly bad; 3) the present application has a low end particle size that is higher than the high end particle size in Navarro; and 4) the present application specifically states that "The large particulate size surprisingly is beneficial in producing the appropriate release rate of the particulate in the present invention" page 13, lines 7 to 19, it is surprising to the Applicant that the Examiner would somehow come to the conclusion that either Navarro meets the claimed 150-840 micron range or the range would be obvious in the proposed combination.

Since the applied prior art is not concerned with a dry mix, does not disclose the claimed limitations of 50% to 80% flour or 0.1% to about 1.0% encapsulated acid, and a mean particle size of the acid of about 150 microns to about 840 microns has not been rendered obvious for the reasons set forth above, Applicant respectfully requests that this rejection be reversed.

2) Claim 18

Claim 18 specifies that the melting point of the encapsulated acid in the dry mix composition is a minimum of 150°F. The Examiner argues that Navarro actually teaches a range above 125°F as a melting point and thus encompasses the 150°F claimed. The Applicant respectfully submits that a disclosed melting point of 125°F is clearly below the minimum of 150°F such that the applied prior art does not anticipate or render obvious the minimum of 150°F. Even a melting point between 125°F and 150°F would not be a minimum of 150°F. The Examiner is reminded that the claims do not claim a melting point of 150°F, but rather a minimum melting point of 150°F. This limitation is simply not met by the applied prior art or properly addressed in the final Office Action such that this rejection should be reversed.

3) Claims 19, 23 and 25-34

Claim 19 of the present application is directed to a batter composition having about 10 to about 80% flour, a leavening system and about 0.01% to 1.0%, encapsulated acid having a mean particle size of about 150 microns to about 840 microns, wherein the acid is citric, fumaric, lactic, malic, phosphoric, sodium acid sulfate or mixtures thereof. The Examiner relies on Narayanaswamy et al. which, according to the Examiner, discloses batter comprising 10 % to 40% flour and 5% to 30% moisture. However, once again, the prior art does not disclose 0.01% to about 1.0% encapsulated acid with a mean particle size of about 150-840 microns.

As detailed above, the Examiner admits that the base reference of Narayanaswamy et al. does not teach a mean particle size of about 150 microns to about 840 microns as claimed. Instead, the Examiner turns to Navarro which teaches coated fumaric acid having a particle size from about 70 to 140 microns. **This prior art particle size is outside of the claimed range.** Apparently, the Examiner is of the opinion that since independent claim 1 of the present application recites a range of “about 150 microns to about 840 microns” and Navarro discloses a particle size from about 70 microns to about 140 microns, the word “about” allows for a size slightly above 140 microns and slightly below 150 microns such that the ranges overlap. While the Applicant does agree that the word “about” is not claiming an exact number but rather some type of variation from the end points of the range, Applicant respectfully submits that the Examiner is expanding the word “about” from its intended meaning. The courts have already ruled that “about” is not an arbitrary term but rather a flexible word with a meaning similar to “approximately” or “nearly.” See *Ex parte Eastwood*, 163 USPQ 316, 317 (Pat. Off. Bd. App. 1968). The courts have held that the term “about” must be determined based on the facts of the case, particularly the prior art verses invention disclosures. Navarro teaches particle size from about 70 to 140 microns, i.e., a 70 micron range, as well as a preferred size of 105 microns. It would be unreasonable to assume that either the 70 micron value or the 140 micron value could be expanded an additional 10 or more microns (approximately 15% for the 70 microns and 7% for the 140 microns) based on the word “about.” In fact, the Examiner’s attention is additionally drawn to the Federal Circuit case of *Eiselstein v. Frank*, 52 F.3d 1035, 34 USPQ 2d 1467, 1468, 1471 (Fed. Cir. 1995) wherein claims reciting a nickel based alloy containing “the balance nickel with nickel constituting about 50 to about 60% of the alloy” were held not to include a nickel range of 45-55%. With this in mind, Applicant respectfully submits that the use of the word “about” clearly does not correlate the upper end of 140 microns in Navarro overlapping with the lower end of 150 microns as presently claimed. **In other words, a range of 70-140 microns is not “about” a range of 150-840 microns.**

In regards to the Examiner's second argument that one of ordinary skill in the art would have been motivated to modify the particle size of the capsule depending on a desired thickness of the particle coating and the amount of substance contained therein, it would appear that the Examiner has actually provided no support for this type of modification. Indeed, close review of Navarro makes clear that tortilla dough made with a large sized, i.e., mean particle size of 300 microns, encapsulated fumaric acid particulates was deemed particularly undesirable. The Examiner's attention is drawn to Figure 1 of the Navarro patent clearly showing that line 8 provides for a much too low pH content. Note that the acid dissolution profile is important because the tortilla is pressed into shape at approximately 30 minutes and it is important for the dough to remain neutral at this time so that the pressed tortilla does not retract into a smaller shape. See the discussion in column 7, line 34 through column 7, line 60. Indeed, the only line that yields a desired dissolution profile is line 2 corresponding with the preferred mean particle size of about 105 microns. See column 5, lines 30-35 and column 7, lines 27-29. In view of the test results set forth in Navarro explicitly stating that adding larger sized encapsulated fumaric acid particles is considered highly undesirable, it is unclear why the Examiner would consider it obvious to increase the particle sizes of Navarro significantly beyond the high end of 140 microns. Indeed, in view of Navarro's explicit statement that the mean particle size coated dispersed fumaric acid particulate should be set at about 70-140 microns, preferably about 80-130 microns, more preferably about 90-120 microns, and most preferably 105 microns (see column 3, lines 50-56), presumably it would be obvious to one of ordinary skill in the art to use a fumaric acid particulate size no greater than 140 microns and actually closer to 105 microns as that is the explicit teaching in column 3, lines 50-60. Any other size would be quite contrary to the teaching of the Navarro reference. To reiterate the prior arguments, given that: 1) Navarro teaches that it is most preferable to use a mean particulate size of 105 microns; 2) Navarro specifically discloses that using large sized particulates is particularly bad; 3) the present application has a low end particle size that is higher than the high end particle size in Navarro; and 4) the present application specifically states that "The large particulate size surprisingly is beneficial in producing the appropriate release rate of the particulate in the present

invention" (see paragraph 0049), it is surprising to the Applicant that the Examiner would somehow come to the conclusion that either Navarro meets the claimed 150-840 micron range or the range would be obvious in the proposed combination.

Simply stated, nowhere does the applied prior art disclose or render obvious about 0.01% to about 1.0% encapsulated acid with a mean particle size of about 150 to about 840 microns as claimed. Therefore, Applicant respectfully submits that this rejection should be reversed.

4) Claim 24

Claim 24 limits the melting point of the encapsulated acid to a minimum of 150°F. The Examiner argues that Navarro actually teaches a range above 125°F as a melting point and thus encompasses the 150°F claimed. The Applicant submits that the prior art melting point of 125°F is clearly below the claimed minimum of 150°F and therefore does not anticipate or render obvious the claim limitation. Even a melting point between 125°F and 150°F would not be a minimum of 150°F. The Examiner is reminded that the claims do not claim a melting point of 150°F, but rather a minimum melting point of 150°F. This limitation is simply not met by the applied prior art or properly addressed in the final Office Action and therefore this rejection should be reversed.

B. Whether claims 35-45 and 57-62 stand properly rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,165,524 to Narayanaswamy et al. in view of U.S. Patent No. 6,312,741 to Navarro and U.S. Patent No. 4,929,464 to Willyard et al.

In order to establish a prima facie case of obviousness, each and every limitation of the claims must be met. See M.P.E.P. § 2143 (*citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). There must be an apparent reason for one of ordinary skill in the art to combine known elements in the fashion claimed by the patent at issue. This analysis should be made explicit. See *KSR International Co. v. Teleflex Inc.*, 127

U.S.1727, 1732 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). As stated by the Court of Appeals for the Federal Circuit, "[i]t is necessary to consider 'the reality of the circumstances, in other words, common sense--in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor.'" *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992), (quoting *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979)). Further, if a reference disclosure has a different purpose from the claimed invention, the inventor would accordingly have had less motivation or occasion to consider it then they would if the reference relates to the same problem. *Id. citing In re Clay*, 966 F.2d 656, 659-60 (Fed. Cir. 1992). A proper rejection under 35 U.S.C. § 103 cannot be based on hindsight knowledge of the invention under consideration for the sole basis of attempting to meet the recitation of the claims. *Environmental Designs, Ltd. v. Union Oil Co. of Cal.*, 218 USPQ 865, 870 (1983).

1) Claims 35, 36 and 40-45

Claim 35 is directed to a method of preparing a fried bakery product using a dry mix which is formed into a batter and deep fried to an internal cooked temperature of about 170-230°F. Neither Narayanaswamy et al. nor Navarro teach the step of deep-frying batter in oil to produce a fried bakery product having an internal cooked temperature of about 170°-230°F as required by claim 35. In fact, it must be realized that Narayanaswamy is concerned with a shelf stable batter, while Navarro is concerned with prolonging the shelf life of a baked product. To this end, the Applicant would submit that one of ordinary skill in the art would not even look to an invention concerned with preserving an already baked product (Navarro) to modify a batter intended to be placed on a store shelf and used to make a baked product which would be presumably, immediately consumed by a consumer (Narayanaswamy). To address some deficiency, the Examiner points to a teaching for an internal donut temperature in Willyard et al. of 150°F **upon reheating a fried donut in a microwave**. Now the rejection modified a batter in view of a baked product in view of a microwave reheated fried product. From any reasonable viewpoint, this is not equivalent to the step of deep-frying batter in oil to



produce a fried bakery product having an internal cooked temperature of about 170°F as required by claim 35. Additionally, Narayanaswamy et al. nor Navarro, even when modified by Willyard, even teach 50-80% flour, or the about 0.01% to 1.0% encapsulated acid claimed. Since several limitations of this claim simply are not present in the applied prior art, this rejection should be reversed.

2) Claim 37

Claim 37 introduces the mean particle size of about 150-840 microns as discussed above in connection with claims 1 and 19. For the sake of completeness, the previous arguments will be again presented here. The Examiner admits that Narayanaswamy et al. does not teach a mean particle size of about 150-840 microns as claimed. Instead, the Examiner turns to Navarro, which teaches coated fumaric acid having a particle size from about 70 to 140 microns. **This particle size is outside of the claimed range.** Apparently, the Examiner is of the opinion that since independent claim 1 of the present application recites a range of “about 150 microns to about 840 microns” and Navarro discloses a particle size from about 70 microns to about 140 microns, the word “about” allows for a size slightly above 140 microns and slightly below 150 microns such that the ranges overlap. While the Applicant does agree that the word “about” is not claiming an exact number but rather some type of variation from the end points of the range, Applicant respectfully submits that the Examiner is expanding the word “about” from its intended meaning. The courts have already ruled that “about” is not an arbitrary term but rather a flexible word with a meaning similar to “approximately” or “nearly.” See *Ex parte Eastwood*, 163 USPQ 316, 317 (Pat. Off. Bd. App. 1968). The courts have held that the term “about” must be determined based on the facts of the case, particularly the prior art verses invention disclosures. Navarro teaches particle size from about 70 to 140 microns, i.e., a 70 micron range, as well as a preferred size of 105 microns. It would be unreasonable to assume that either the 70 micron value or the 140 micron value could be expanded an additional 10 or more microns (approximately 15% for the 70 microns and 7% for the 140 microns) based on the word “about.” In fact, the Examiner’s attention is

additionally drawn to the Federal Circuit case of *Eiselstein v. Frank*, 52 F.3d 1035, 34 USPQ 2d 1467, 1468, 1471 (Fed. Cir. 1995) wherein claims reciting a nickel based alloy containing “the balance nickel with nickel constituting about 50 to about 60% of the alloy” were held not to include a nickel range of 45-55%. With this in mind, Applicant respectfully submits that the use of the word “about” clearly does not correlate the upper end of 140 microns in Navarro overlapping with the lower end of 150 microns as presently claimed. In other words, a range of 70-140 microns is not “about” a range of 150-840 microns.

In regards to the Examiner's second argument that one of ordinary skill in the art would have been motivated to modify the particle size of the capsule depending on a desired thickness of the particle coating and the amount of substance contained therein, it would appear that the Examiner has actually provided no support for this type of modification. Indeed, close review of Navarro makes clear that tortilla dough made with a large sized, i.e., mean particle size of 300 microns, encapsulated fumaric acid particulates was deemed particularly undesirable. The Examiner's attention is drawn to Figure 1 of the Navarro patent clearly showing that line 8 provides for a much too low pH content. Note that the acid dissolution profile is important because the tortilla is pressed into shape at approximately 30 minutes and it is important for the dough to remain neutral at this time so that the pressed tortilla does not retract into a smaller shape. See the discussion in column 7, line 34 through column 7, line 60. Indeed, the only line that yields a desired dissolution profile is line 2 corresponding with the preferred mean particle size of about 105 microns. See column 5, lines 30-35 and column 7, lines 27-29. In view of the test results set forth in Navarro explicitly stating that adding larger sized encapsulated fumaric acid particles is considered highly undesirable, it is unclear why the Examiner would consider it obvious to increase the particle sizes of Navarro significantly beyond the high end of 140 microns. Indeed, in view of Navarro's explicit statement that the mean particle size coated dispersed fumaric acid particulate should be set at about 70-140 microns, preferably about 80-130 microns, more preferably about 90-120 microns, and most preferably 105 microns (see column 3, lines 50-56), presumably it would be

obvious to one of ordinary skill in the art to use a fumaric acid particulate size no greater than 140 microns and actually closer to 105 microns as that is the explicit teaching in column 3, lines 50-60. Any other size would be quite contrary to the teaching of the Navarro reference. Given that: 1) Navarro teaches that it is most preferable to use a mean particulate size of 105 microns; 2) Navarro specifically discloses that using large sized particulates is particularly bad; 3) the present application has a low end particle size that is higher than the high end particle size in Navarro; and 4) the present application specifically states that "The large particulate size surprisingly is beneficial in producing the appropriate release rate of the particulate in the present invention" page 13, lines 7 to 19, it is surprising to the Applicant that the Examiner would somehow come to the conclusion that either Navarro meets the claimed 150-840 micron range or the range would be obvious in the proposed combination. Since the claimed about 150 to about 840 micron limitation has not been rendered obvious, this rejection should be reversed.

3) Claims 38 and 39

Claim 38 requires the fried bakery products to have a yeast-free and mold-free shelf life of at least 30 days. **The Examiner simply has not addressed this limitation.** Since this limitation is not in the applied prior art, the rejection of this claim should be reversed.

4) Claim 57

Like other related claims discussed above, claim 57 introduces the minimum melting point of 150°F for the encapsulated acid. Certainly, the Examiner is not relying upon any teaching in the additionally cited patent to Willyard et al. for this feature. Although fully argued above, for the sake of completeness, it is pointed out that Navarro actually teaches 125°F as a melting point. The Applicant submits that the prior art melting point of 125°F is clearly below the claimed minimum of 150°F and therefore does not anticipate or render obvious the claim limitation. Even a melting point between

125°F and 150°F would not be a minimum of 150°F. The Examiner is reminded that the claims do not claim a melting point of 150°F, but rather a minimum melting point of 150°F. This limitation is simply not met by the applied prior art or properly addressed in the final Office Action and therefore this rejection should be reversed.

5) Claim 58

As outlined above, claim 58 is an independent claim directed to a fried bakery product made from a dry mix composition including about 50% to about 80% flour, a leavening system and about 0.01% to about 1.0% encapsulated acid. In addition, the encapsulated acid must have a mean particle size of about 150 microns to about 840 microns. Furthermore, the product includes moisture in a ratio of about 50:1 to about 1:1 and exhibits an extended yeast-free and mold-free shelf life of at least 21 days.

Initially it should be recognized that the fried product of this claim is being rejected based on modifying the batter of Narayanaswamy et al. in view of the baked product of Navarro in view of the microwave reheated fried product of Willyard et al. It is respectfully submitted that, although each of these prior art reference pertain to food products, the Examiner is still impermissibly picking and choosing select features from each reference to establish a random combination just to address the claim limitations. It is submitted to be unreasonable to reject a dry mix, a batter, a method of preparing a deep-fried bakery product, and the fried bakery product of this claim, all on the same mix-match of prior art. Regardless, the Examiner correctly identifies that Narayanaswamy et al. only discloses 10-40% flour on page 8 of the Office Action, the specified range of encapsulated acid is not addressed, and the shelf life limitation is not at all addressed. Under these circumstances, it is submitted that this rejection is clearly in error, regardless of the decision in the pre-appeal conference. Also, the limitation regarding the size of the encapsulated acid being between about 150 microns and 840 microns is not in the prior art. Again, the shortcomings in the applied prior art to this feature has been detailed numerous times above and these arguments are incorporated

here by reference. Certainly, the Examiner is not relying upon any teaching in the additionally cited patent to Willyard et al. for this feature. Therefore, the Applicant stands by the position that **a range of 70-140 microns as set forth in Navarro is not "about" a range of 150-840 microns** and one of ordinary skill would not be motivated to modify the Navarro arrangement at least given that: 1) Navarro teaches that it is most preferable to use a mean particulate size of 105 microns; 2) Navarro specifically discloses that using large sized particulates is particularly bad; 3) the present application has a low end particle size that is higher than the high end particle size in Navarro; and 4) the present application specifically states that "The large particulate size surprisingly is beneficial in producing the appropriate release rate of the particulate in the present invention" page 13, lines 7 to 19. For all of these reasons, the rejection of this claim should be reversed.

6) Claims 59 and 60

In a manner similar to claims 38 and 39 argued above, claims 59 and 60 are concerned with an extended, mold-free shelf life of the claimed product. Where independent claim 58 recites a lower shelf life limit of 21 days, these claims require at least 30 days. Since the Examiner has just not addressed these limitations, it is submitted that a reversal is clearly appropriate.

7) Claim 61

Although not seen to be a main inventive aspect, claim 61 does limit the invention to a cake donut. This limitation is simply never addressed by the Examiner during the prosecution.

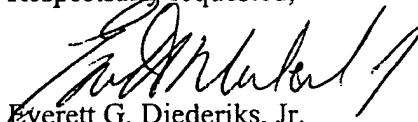
8) Claim 62

Like claim 57, claim 62 introduces the minimum melting point of 150°F for the encapsulated acid. Certainly, the Examiner is not relying upon any teaching in the additionally cited patent to Willyard et al. for this feature. Although fully argued above, for the sake of completeness, it is pointed out that Navarro actually teaches 125°F as a melting point. The Applicant submits that the prior art melting point of 125°F is clearly below the claimed minimum of 150°F and therefore does not anticipate or render obvious the claim limitation. Even a melting point between 125°F and 150°F would not be a minimum of 150°F. The Examiner is reminded that the claims do not claim a melting point of 150°F, but rather a minimum melting point of 150°F. This limitation is simply not met by the applied prior art or properly addressed in the final Office Action and therefore this rejection should be reversed.

C. Conclusion

In rejecting the subject claims, the Examiner has failed to provide a combination of references which properly teaches each and every limitation of the claims, while also failing to articulate the manner in which he envisions one of ordinary skill in the art properly combining the references. For at least the reasons set forth above, the Appellant respectfully submits that the present invention is patentably defined over the prior art of record such that the Examiner's rejections should be reversed and the application passed to issue.

Respectfully requested,



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### **VIII. CLAIMS APPENDIX**

1. A dry mix composition for use in a bakery product, comprising:  
about 50% to about 80% flour;  
a leavening system; and  
about 0.1% to about 1.0% encapsulated acid; wherein the encapsulated acid  
having a mean particle size of about 150 microns to about 840 microns is selected  
from the group consisting of citric acid, fumaric acid, lactic acid, malic acid,  
phosphoric acid, sodium acid sulfate and mixtures thereof.
6. The dry mix composition of claim 1 additionally comprising a food grade organic  
acid selected from the group consisting of benzoic, propionic, sorbic and mixtures  
thereof.
7. The dry mix composition of claim 1 additionally comprising about 20% to about  
40% sugar.
8. The dry mix composition of claim 1 additionally comprising about 2% to about  
30% of a fat.
9. The dry mix composition of claim 1 additionally comprising about 0.01% to  
about 4% of an emulsifier.
10. The dry mix composition of claim 1 additionally comprising about 1% to about  
8% of a humectant.
11. The dry mix composition of claim 1 additionally comprising about 0.05% to  
about 0.7% of a hydrophilic colloid.
12. The dry mix composition of claim 1 additionally comprising starch.

13. The dry mix composition of claim 1 additionally comprising nonfat dry milk solids.
14. The dry mix composition of claim 1 additionally comprising flavor agents.
15. The dry mix composition of claim 1 additionally comprising color agents.
16. The dry mix composition of claim 1 additionally comprising edible inclusions.
17. The dry mix composition of claim 1 wherein the dry mix is used to produce a fried bakery product.
18. The dry mix composition of claim 1 wherein the encapsulated acid has a minimum melting point of 150 °F.
19. A batter composition for use in a bakery product, comprising:
  - about 10% to about 80% flour;
  - a leavening system;
  - about 0.01% to about 1.0% encapsulated acid having a particle size of about 150 microns to about 840 microns; and
  - a moisture, in a ratio of about 50:1 to about 1:1;wherein the encapsulated acid is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, sodium acid sulfate and mixtures thereof.
23. The batter composition of claim 19 wherein the batter is fried to produce a fried bakery product.
24. The batter composition of claim 19 wherein the encapsulated acid has a minimum melting point of 150 °F.



25. The batter composition of claim 19 additionally comprising a food grade organic acid selected from the group consisting of benzoic, propionic, sorbic and mixtures thereof.
26. The batter composition of claim 19 additionally comprising about 2% to about 30% of a fat.
27. The batter composition of claim 19 additionally comprising about 0.01% to about 4% of an emulsifier.
28. The batter composition of claim 19 additionally comprising about 1% to about 8% of a humectant.
29. The batter composition of claim 19 additionally comprising about 0.05% to about 0.7% of a hydrophilic colloid.
30. The batter composition of claim 19 additionally comprising starch.
31. The batter composition of claim 19 additionally comprising nonfat dry milk solids.
32. The batter composition of claim 19 additionally comprising flavor agents.
33. The batter composition of claim 19 additionally comprising color agents.
34. The batter composition of claim 19 additionally comprising edible inclusions.
35. A method for preparing a bakery product, comprising the steps of:
  - A. providing a dry mix, said mix on a dry weight basis comprising:  
about 50% to about 80% flour;  
a leavening system; and

- about 0.01% to 1.0% encapsulated acid;
  - B. forming a batter comprising:
    - said dry mix;
    - a moisture, in a ratio of dry mix to moisture of about 50:1 to about 1:1;
  - C. allowing the leavening system to react in said batter;
  - D. depositing individual-serving size portions of said batter into heated oil;
  - E. deep-frying the batter in oil having a temperature of about 270°F to about 400°F to produce a fried bakery product,
    - wherein the fried bakery product achieves an internal cooked temperature of about 170°F to about 230°F; and
- wherein said fried bakery products have a yeast-free and mold-free shelf life of at least 21 days.

36. The method of claim 35 wherein the encapsulated acid of said dry mix is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, sodium acid sulfate and mixtures thereof.

37. The method of claim 35 wherein the encapsulated acid of said dry mix has a mean particle size of from about 150 microns to about 840 microns.

38. The method of claim 35 wherein the fried bakery products have a yeast-free and mold-free shelf life of at least 30 days.

39. The method of claim 35 wherein the fried bakery products have a yeast-free and mold-free shelf life of at least 40 days.

40. The method of claim 35 wherein the dry mix additionally comprises a food grade organic acid selected from the group consisting of benzoic, propionic, sorbic and mixtures thereof.

41. The method of claim 35 wherein the dry mix additionally comprises about 20% to about 40% of a sugar.
42. The method of claim 35 wherein the dry mix additionally comprises about 2% to about 12% of a fat.
43. The method of claim 35 wherein the dry mix additionally comprises about 0.01% to about 4% of an emulsifier.
44. The method of claim 35 wherein the dry mix additionally comprises nonfat dry mild solids.
45. The method of claim 35 wherein the leavening system is a chemical leavening system.
57. The method of claim 35, wherein the encapsulated acid has a minimum melting point of 150°F.
58. A fried bakery product comprising;  
a dry mix composition including;  
about 50% to about 80% flour,  
a leavening system, and  
about 0.1% to about 1.0% encapsulated acid, wherein the encapsulated acid having a mean particles size of about 150 microns to about 840 microns is selected from the group consisting of citric acid, fumaric acid, lactic acid, malic acid, phosphoric acid, sodium sulfate and mixtures thereof; and  
a moisture in a ratio of about 50:1 to about 1:1; wherein the fried bakery product has an extended yeast-free and or mold-free shelf life of at least 21 days.
59. The fried bakery product of claim 58, having an extended yeast-free and or mold-free shelf life of at least 30 days.

60. The fried bakery product of claim 58, having an extended yeast-free and or mold-free shelf life of at least 40 days.
61. The fried bakery product of claim 58, wherein the bakery product is a cake donut.
62. The fried bakery product of claim 58, wherein the encapsulated acid has a minimum melting point of 150°F.

**IX. EVIDENCE APPENDIX**

Not Applicable

**X. RELATED PROCEEDING APPENDIX**

Not Applicable